30 August 2001

Improving Heavy Vehicle Efficiency on New Zealand Highways
- Proposals for Higher Mass and Dimension Limits

"The study---suggests heavier trucks will mean fewer, safer trucks, which in turn, means newer trucks of a higher safety standard than at present.
Fewer, safer trucks on the road will reduce the risk of truck crashes. Another benefit could be a reduction in the amount of imported fuel required by the newer, more efficient trucks."
(Transit New Zealand)

Introduction

1. The Forest Owners Association (FOA) welcomes and strongly supports proposals for higher mass and dimension limits for heavy vehicles. In providing this support for the principles of the proposed changes, the Association also seeks a variation from the specific proposals contained in the Transit New Zealand paper to meet the particular needs of the industry.

2. The Association is a voluntary organisation representing the interests of commercial forest growers. The Association has 220 members whose forest holdings represent approximately 85% of New Zealand's commercial forest estate. The members include all the major forest corporates, the majority of medium sized forest companies, many forest syndicates, and a number of farm foresters.

Summary of Association Position

3. The Association supports the inclusion of the Transit NZ Discussion Document in the weights and dimension Rule change. While the Association applauds the initiative, it must point out that because of the particular nature of industry's product, ie logs, Option A has relatively little applicability to the industry.

4. The introduction of "Scenario A" 50 tonne and 20 metres, would provide negligible safety or economic benefits to the forest industry. This is primarily because 45% of logs are carted in single packet loads and there is no ability to lower the centre of gravity of the load within the 20 metre length restriction, without lowering load height. Lowering the single packet load height only results in more trucks needed to cart the same volume decreasing safety (as the probability of accidents would rise) and increasing the overall cost of cartage.

5. The Association supports "Scenario B", 62 tonnes and 25 metres, as a design envelope which could be applied in the same manner as the current maximums of 44 tonne and 20 metres provide a design envelope for logging trucks right now. This would allow the industry to design and manufacture the optimum vehicle to cart logs in the safest configuration. It would also promote the double bunk loading of logs to ensure permanent reductions in the centre of gravity and thus create a more stable rollover threshold within the constrains imposed by the road controlling authorities.

6. The forestry industry has been operating heavier vehicles in the Central North Island forest roads for many years. Trucks grossing 100 tonnes loaded weight and up to 40m in length have provided significant cost savings in an off highway situation. Based on the off-highway experience, the 62 tonne 25 metre configuration would result in less pavement wear. The equivalent standard axle loading of this option, compared to current configurations, would reduce the impact on the road pavement by about 20%.

7. The Association therefore supports the introduction of the proposed 62 tonne 25 metre envelope on the basis that the forestry industry would develop specific configurations within this envelope to satisfy the particular features of the industry while at the same time meeting the LTSA requirements in respect to safety and environmental standards.

Overall Benefits from Proposals

8. This submission relates specifically to the impacts of the proposed changes on the forest growing and harvesting sector. However, in regard to the wider benefits from the proposed changes, the Association endorses Business New Zealand's support for the Transit NZ Proposals. In summary, BNZ's submission makes the following points:

   - The proposed increases in heavy vehicle weights and measures would increase GDP by 2.2% - 3.7%.
   - Fewer, newer and safer vehicles would be needed to transport a greater amount of freight.
   - The fewer number of vehicles with up-to-date technology would mean greater fuel efficiency per tonne carried with consequential environmental benefits.
   - The increased mass and dimensions limits would significantly improve New Zealand transport competitiveness on an international basis.
   - At a regional level, Transit's research suggests that there would be particularly high benefit/cost ratios for the Waikato, Bay of Plenty, Wellington and Canterbury regions.
   - The higher productivity arising from the increased weights and dimensions would result in lower freight rates (as much as 12% for Scenario B).
   - Business NZ supports the proposal for LTSA to introduce performance based standards for the existing fleet aimed at reducing the risk of crashes.

- The introduction of the proposals would be unlikely to result in rail losing much existing business.

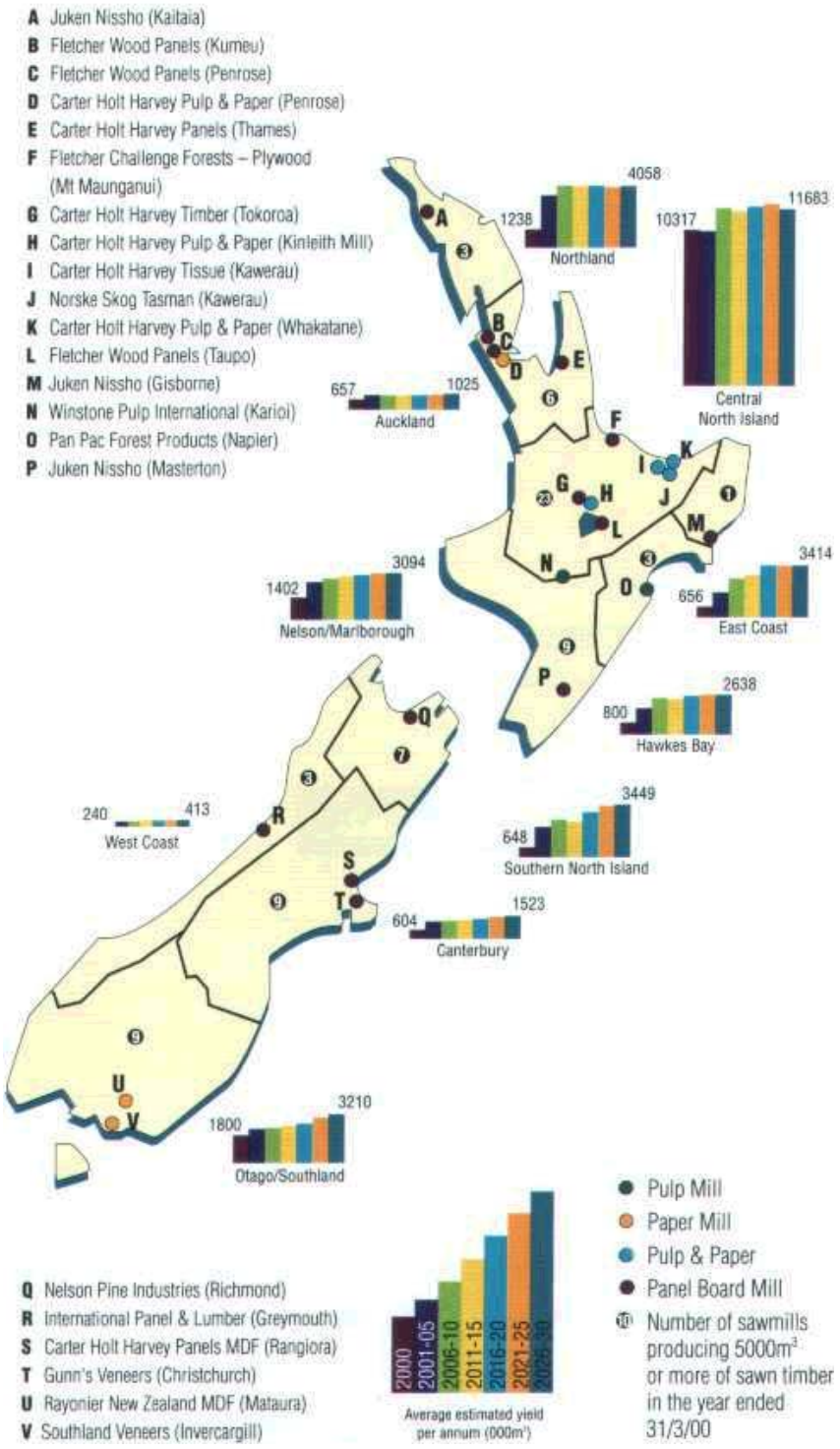
Forecasted Growth in Forest Industry's Road Usage

9. Over the next 25 years, New Zealand's total harvested wood is projected to increase from 18 million m^3 in 2000 to around 42 million m^3 in 2025 i.e. by 128 per cent (refer below graph). More immediately, between 2001 and 2006, the harvest will increase from 19.9 million cubic metres to 30.129 million cubic metres, and between 2006 and 2011 from 30.129 million cubic metres to 31.254 million cubic metres.

10. The largest increases over the next 5 – 10 years will occur in the East Coast North Island, North Auckland, lower North Island, Nelson/Marlborough and Otago/Southland as shown in the map below.

Location Of Major Forest Industries and Expected Woodflows by Wood Supply Region

(Woodflows – 2000 Other – 3/00)



11. If it is assumed that close to maximum loads are carted on existing log trucks with a maximum loaded weight of 44 tonnes, the number of log truck trips required to cart the increasing harvests over the next five years will increase from the current 430,000 trips to around 770,000 trips in 2006. In fact, as the average load will be less than the maximum 30 tonnes, the actual number of log truck trips will be even higher.

12. The percentage increases in **total kilometres travelled** on public roads will be greater than the percentage increases in truck trips because in future the average distance from forest to mill or port will be longer than the existing distances. Certainly the proportion of public highway cartage in the newer forest areas will be higher than is the case with established forests.

    The following table illustrates the impact of the increased harvest on public highway log truck usage based on the current 44 tonne limit assuming:-
    (i) a 30 tonne payload and
    (ii) 7 million cubic metres transported by non road modes.

	2001	2006		2011	
	No. Trips	No.Trips	% change from 2001	No. Trips	% change from 2001
Current	430,000	770,000	+179%	808,000	+188%

The theoretical log truck movements resulting from the introduction of the proposed new weights and dimensions are shown in the next table. As noted earlier, because of the nature of the product the industry carts, it would not be possible to take advantage of Option A. Option B reflects a maximum position and truck loads which, in reality, will be lower on average within the design envelope. However the table does provide an indication of the potential to reduce truck numbers, relative to using current truck configurations.

	Trips		
	2001	2006	2011
Current	430,000	770,000	808,000
Option A	-	680,000	713,000
Option B	-	580,000	606,000

13. The largest percentage increase in forecast harvests will occur in "newer" forest regions such as East Coast North Island and North Auckland. These two regions in particular have a poor roading infrastructure and are poorly resourced to provide local funds for new roads or for road upgrades. Because large scale forestry is relatively new to these regions, many have not constructed heavy vehicle routes to by-pass built up areas. Consequently, in these regions, log trucks are often forced to travel along roads through urban areas. The implementation of the Transit NZ proposals would significantly slow the growth in the number of truck trips through these areas.

14. An increase of the maximum loaded weight from 44 tonnes to 62 tonnes would not result in a commensurate increase in the roadwear. Under the configuration of the new higher weights and dimension vehicles, there would be fewer passes than would otherwise be the case and therefore less wear and tear.

Measures to Improve Safety of Logging Vehicles

15. The forest industry has recognised the safety concerns relating to logging trucks and trailers and is absolutely committed to improving the safety of logging trucks on public highways. The Association has worked closely with all relevant parties over the past few years in introducing measures to reduce logging truck accidents including rollovers. These initiatives have included workshops to improve understanding of the issue, the introduction of new driver training and of a new national drivers' certificate, voluntary agreement to lower the height of log loads, the introduction of the "three strikes scheme", a revamped 0800 reporting scheme, the development of a Log Truck Safety Accord, the development of a proposed Operator Safety Rating Scheme, and a second series of industry workshops held from 28 August to 11 September.

16. These and other measures have been instrumental in reducing the incidence of log truck accidents significantly. The LTSA has reported a 64% reduction in the incidence of logging truck rollovers between 1996 and 2000.

17. In spite of the initiatives taken and the success achieved by the logging truck industry in reducing the incidence of logging truck accidents, little if any improvements are likely within the existing weights and dimension constraints, certainly improvements which would retain the economic viability of the sector i.e. improvements have been taken as far as possible without a step change in the Rules. Any further improvements will be extremely difficult and costly, and would result in only marginal safety gains Therefore further improvements in logging truck safety performance rests very much in the hands of the LTSA and local bodies – the two agencies which are in a position to influence the decision on the weights and dimension of heavy vehicles on public roads.

Non-Economic benefits of Increased Weights and dimensions

18. The benefits from a significantly lower number of log truck trips (relative to what would occur if the existing 44 tonne restriction is retained) will be reflected in less road damage, improved environmental outcomes through the use of less energy, and less exposure of the public – both other road users and local communities – to logging truck traffic. In addition, as the Transit New Zealand document "Improving Heavy Vehicle Efficiency on NZ Roads" states, the introduction of the proposed increased weights and dimensions would result in improved safety. This would result from the

introduction of tougher performance standards as developed by Transit NZ and enforced by the LTSA.

19. In particular regard to the 62 tonne option or a variation on it as proposed by the Association, the new standards would ensure that the heavier vehicles performed safely at intersections and railway level crossings; and would maintain current speed requirements on uphill grades. Equally important would be the higher standard of driver training and performance required.

20. The Association fully supports the proposed higher safety standards which it is proposed would accompany the introduction of increased weights and dimensions. We consider that our involvement in the number of recent initiatives to improve log truck safety clearly demonstrates our commitment to ensuring continuous improvement in this area.

Economic Benefits of Proposals to Forest Sector

21. The potential economic benefits to the forest industry and the country from the introduction of the proposed higher weights and dimension limits would be substantial.

22. As New Zealand has a mature domestic wood products market, virtually all of the increasing wood harvest will need to be exported. Currently around 30 per cent of harvested wood is consumed on the local market with around 70 per cent exported. By 2011, it is anticipated that the percentages of the total harvest exported will have increased significantly.

23. The international markets in wood products are extremely competitive and wood products are also facing increasing international pressure from wood substitutes. The combined effects of these international market pressures is that the industry is experiencing very low profit margins and low returns on invested capital.

24. The existing heavy vehicle weight restrictions in New Zealand compared to a number of our trading competitors is placing additional pressures on the New Zealand industry's competitive position as illustrated below:

Country	Maximum Weight	Maximum Length	Maximum Weight on a Tandem Axle
Australia	62.5 tonnes	25 metres	16.5 tonnes
Canada	62.5 tonnes	23 metres	17 tonnes
Finland	60 tonnes	24 metres	18 tonnes
Netherlands	50 tonnes	22 metres	18 tonnes
New Zealand	**44 tonnes**	**20 metres**	**15 tonnes**
Sweden	60 tonnes	25 metres	18 tonnes
United States (Alaska, Idaho, Michigan, North & South Dakota, Wyoming States	Up to 66 tonnes	Up to 23 metres	Up to 16.8 tonnes

25. As the forest sector is a relatively small player internationally, and as a large proportion of its current exports are in commodity or relatively unprocessed form, the industry has very limited ability to influence world wood product prices. Consequently, cost reductions through efficiency improvements and lower charges are the industry's primary focus to improve margins.

26. The Government and the forest industry are working in partnership through the Wood Processing Strategy to increase the proportion of the country's timber harvest which is further processed in New Zealand. A key to the attainment of this objective is the creation of an economic environment attractive to new investment capital from both domestic and international sources.

27. The introduction of the proposed higher weights and dimension limits would be an important factor in establishing the business case for investment capital because it would:
    - significantly lower the cost of transport from the forest to the port or mill, and for processed products from the mill to the port; and
    - reduce forest companies' exposure to unfavourable public perceptions by reducing the number of logging trucks on the road than would otherwise be the case, and at the same time improve the level of safety for the public.

28. The design envelope offered under Option B, where it could be operated, would significantly reduce the costs of transporting logs from the forest to mill or port by about $2.50 per cubic metre. This equates to $32 million/year on current volumes and $75 million/year based on projected 2006 volumes. Option A provides negligible economic benefits for the forest sector.

29. Together with the joint work being undertaken by the government and the industry to upgrade the roading infrastructure required to transport the increasing log harvest from the forest to State Highways and major arterial routes, the introduction of higher

weights and dimension limits would improve the case for additional investment in New Zealand wood processing capability.

Transport of Wood Products by Rail

30. Rail will play an important role in the cartage of timber products in those areas where there is a current rail infrastructure and where costs are competitive with road. At the same time, the proposed changes to heavy vehicle weights and dimensions will assist in minimising timber product transport costs by providing competition in those areas where rail is operated as a virtual monopoly.

31. While some marginal volume will change from road to rail as a result of the proposed changes in the log truck envelope, the extent of the change is likely to be relatively minimal and will depend largely on the relative cartage rates of the two modes.

32. Rail offers no fuel efficiency benefits over road under 400 kilometres particularly where there is limited backloading. At present rail loads for forest products are around 160 kilometres, with average heavy vehicle road trips being around 70 kilometres.

Summary

33. In summary, the Forest Owners Association strongly supports the introduction of proposals for higher mass and dimension limits for heavy vehicles. While the two specific options outlined in the Discussion Document would have relatively little applicability to the forest sector, (particularly Option A), if modified as suggested by the Association, the economic benefits to the sector and the country would be substantial. At the same time, there would be significant advantages in terms of enhanced safety, improved environmental outcomes, lower production costs, and improved employment opportunities.

Recommendation

34. The Association recommends that the Land Transport Safety Authority should incorporate Transit New Zealand's proposals into the Draft Vehicle Dimensions and Mass Rule and provide for modifications within the Option B envelope to meet the particular needs of the forest sector.

35. The Association would welcome the opportunity to discuss with Transit New Zealand and the LTSA its proposals for a modified configuration within the envelope of proposed Option B.